

Code No: RT32011

**R13****SET - 1****III B. Tech II Semester Supplementary Examinations, November - 2018****ENVIRONMENTAL ENGINEERING – I**

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)2. Answering the question in **Part-A** is compulsory3. Answer any **THREE** Questions from **Part-B**

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**PART -A**

- 1 a) Discuss the factors affecting water demand. [4M]
- b) What are the sources of water? [3M]
- c) Write a note on common impurities found in water. [4M]
- d) What do you understand by treatment of water? Why is it necessary? [3M]
- e) Write short note on Softening of Water [4M]
- f) What are requirement of distribution of water? [4M]

**PART -B**

- 2 a) Describe the importance and necessity of protected water supply system. [8M]
- b) Explain in detail about the population forecasting. [8M]
- 3 a) Differentiate between the gravity and pressure conduits? [3M]
- b) What are the factors governing the selection of Intake structures [8M]
- c) Explain the balancing storage capacity of reservoir by mass curve analysis. [5M]
- 4 a) Explain in brief various important tests conducted for chemical examination of water. [8M]
- b) Describe the WHO guidelines for drinking water. [8M]
- 5 a) Describe various types of coagulation commonly used in water treatment. [8M]
- b) Describe with help of a neat sketch slow sand filter. Explain its working. [8M]
- 6 a) Discuss the chlorination and Disinfection methods [8M]
- b) Distinguish between fluoridation and defluoridation. [8M]
- 7 a) Discuss about Hardy Cross method in detail [8M]
- b) Discuss the sluice valves, scour valves and check valves. [8M]

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